

Claims

1. Data processing apparatus configured to receive signals from an input sensor arranged to duplicate or replace operations of a keyboard, said signals corresponding to positions of mechanical interactions with said sensor, said apparatus comprising:

processing means configured to process data derived from said input sensor including positional data corresponding to the position of a mechanical interaction with said input sensor and a second data type corresponding to the absence of a mechanical interaction with said input sensor, wherein said processing means is configured to generate data representing a first character in response to processing an item of data of said second type followed by positional data corresponding to a first position, and to generate data representing a different second character in response to processing positional data corresponding to a different second position followed by an item of data of said second type.

2. Data processing apparatus according to claim 1, wherein said input sensor comprises a first conducting layer and a second conducting layer, each of said conducting layers having a conductive track positioned along opposing edges, and said data processing apparatus is configured to apply a voltage between said conductive tracks of said first layer and to measure the voltage appearing at a conductive track of said second layer to determine said positional data.

3. Data processing apparatus according to claim 1 or claim 2, wherein said processing means is configured to:

(a) perform a first measurement relating to the position of a mechanical interaction with said sensor to generate a first measurement value;

(b) perform a second measurement relating to the position of said mechanical interaction to generate second value; and

(c) generate said positional data only when said first value is within a predetermined amount of said second value.

4. Data processing apparatus according to any of claims 1 to 3, wherein said sensor is an XY position sensor, and said positional data corresponds to the position within a continuous area defined by said sensor.

5. Data processing apparatus according to any of claims 1 to 4, wherein said processing means is configured to measure a parameter of said sensor relating to the pressure applied to said sensor.

6. Data processing apparatus according to claim 5, wherein said positional data is generated by said processing means only when said measured parameter exceeds a predetermined amount.

7. Data processing apparatus according to any of claims 1 to 6, wherein said data processing apparatus comprises a hand-held computer.

8. Data processing apparatus according to any of claims 1 to 7, wherein said processing means comprises two processing devices, such that:

5 one of said processing devices is configured to receive said signals from said input sensor and to generate said positional data and data of said second data type; and

10 the second of said processing devices is configured to process said positional data and data of said second data type to generate data corresponding to displayable characters.

9. Data processing apparatus according to claim 8, wherein second processing device is located in a computer.

15 10. Data processing apparatus according to any of claim 8 or 9, wherein said first processing device forms part of a keyboard assembly.

20 11. Data processing apparatus according to any of claims 8 to 10, wherein said first processing device is configured to generate a stream of data comprising positional data, and to send positional data to said second processing device only when an item of positional data differs from the immediately preceding item of sent data by more than a predetermined amount.

25 12. Data processing apparatus according to any of claims 1 to 11, wherein said input sensor forms part of said data processing apparatus,

and said input sensor comprises at least two layers of conductive fabric.

5 **13.** A method of processing signals received from an input sensor arranged to replace operations of a keyboard, said signals corresponding to positions of mechanical interactions with said sensor, wherein said method comprises:

 processing data derived from said signals, said data comprising positional data corresponding to the position of a mechanical interaction with said input sensor and a second data type corresponding to the
10 absence of a mechanical interaction with said input sensor, such that data representing a first character is generated in response to processing an item of data of said second type followed by positional data corresponding to a first position, and data representing a different second character is generated in response to processing positional data corresponding to a
15 different second position followed by an item of data of said second type.

14. A method of processing signals according to claim 13, wherein said input sensor comprises a first conducting layer and a second conducting layer, each of said conducting layers having a conductive track
20 positioned along opposing edges, and said data processing apparatus is configured to apply a voltage between said conductive tracks of said first layer and to measure the voltage appearing at a conductive track of said second layer to determine said positional data.

25 **15.** A method of processing signals according to claim 13 or claim 14, wherein said method includes the steps of:

(a) performing a first measurement relating to the position of a mechanical interaction with said sensor to generate a first measurement value;

(b) performing a second measurement relating to the position of said mechanical interaction to generate second value; and

(c) generating said positional data only when said first value is within a predetermined amount of said second value.

16. A method of processing signals received from an input sensor according to any of claims 13 to 15, wherein said sensor is an XY position sensor, and said positional data corresponds to the position within a continuous area defined by said sensor.

17. A method of processing signals received from an input sensor according to any of claims 13 to 16, wherein a parameter of said sensor relating to the pressure applied to said sensor is measured, and said positional data is generated by only when said parameter exceeds a predetermined amount.

18. A method of processing signals received from an input sensor according to any of claims 13 to 17, wherein a stream of data comprising positional data is generated, and an item of positional data is processed to generate data representing a character only when said item of positional data differs from the immediately preceding item of data in said stream by more than a predetermined amount.